

**SUMMARY OF MITIGATING SYSTEMS PERFORMANCE INDEX (MSPI)
PRA QUALITY TASK GROUP MEETING
October 13, 2004
9:30 a.m. - 2:30 p.m.**

Attendees

1. Gareth Parry
2. Michael Cheok
3. James Trapp
4. Don Dube
5. William Stillwell (by telephone)
6. Jeff Gabor
7. Tony Pietrangelo (NEI)

Meeting Notes

The following documents were passed out at the start of the meeting:

- Final Meeting Agenda
- Final Task Group Charter
- Memorandum from Gareth Parry, dated October 12, 2004, "Identification of Issues of Importance for MSPI"

In terms of the U.S. NRC's phased approach to PRA quality, the MSPI will be a Phase 2 application, where the quality of the base PRA will be demonstrated using RG 1.200.

The task group recognizes that, even when different PRAs meet the requirements of the ASME PRA standard to some agreed upon capability category, there can still be variability in the approaches used that can influence the input to the MSPIs. Recognizing the role of the MSPI as an index, but not a precise measure of changes on CDF, the variability of interest is more on the order of factors of 3 to 10 rather than factors of 2 or less. The concern of the NRC is that an inappropriate reduction in the Birnbaum importance measure for a system would result in a corresponding increase in the number of failures that would be needed to result in a change of risk significance category (color). The bulk of the discussion, therefore, was focused on reviewing the memorandum by Gareth Parry, to identify those PRA modeling issues that: a) could be addressed differently by different licensees, and b) can have a significant impact on the Birnbaum importance for the components of the MSPI systems. The group members agreed that the suggestions in the memorandum were a good start, but several suggestions were made to both delete some issues and add others.

It was observed that the majority of the issues discussed were indeed addressed during the completed peer reviews. This list, therefore, when completed, will provide guidance to licensees, when performing their self-assessment to update the peer review in accordance with NEI-00-02 and RG 1.200, on which issues to pay particular attention and to address as necessary. The list will also form a basis for a potential audit of the licensees' base PRA by the staff.

The task group agreed that in addition to generating this list, it would also be useful to provide guidance on how to demonstrate that a particular approach to modeling (for certain PRA elements), or range of parameter values is acceptable within the context of the MSPI.

While the discussion focused on the issues that have a direct influence on specific MSPIs, the base PRA in its entirety cannot be ignored, since the Birnbaum importance measures are affected by everything in the model. So for, example, initiating events that have been left out of the model could affect the significance of a specific system. Therefore, a review and disposition of all the supporting requirements of the ASME Standard is necessary. The question was raised whether all the A and B findings of the peer review process would need to be addressed for the MSPI application. The group will discuss this and other issues at its next meeting to be held on November 3, 2004 at the NRC headquarters.

Action Items

1. Jim Trapp will research the HEP values used in the licensee PRAs for those human failure events identified during the meeting as being potentially significant to the MSPI values
2. Gareth Parry will revise the list of issues to incorporate comments from the meeting.
3. Don Dube will confirm that the issues include those identified in the MSPI Pilot Plant studies
4. Bill Stillwell, Mike Cheok and Gareth Parry will map the issues onto the ASME Standard requirements
5. Jeff Gabor, Bill Stillwell, Mike Cheok and Gareth Parry will propose ways of addressing the variability in the significant issues, including identifying acceptable alternatives
6. All to review the ASME Standard requirements to determine the appropriate capability category for the MSPI application